

Work Order ID 64071

Page 1

Wednesday, November 24, 2010 8:34:16 AM

Item ID: D3407-043

Accept



Setup Start



Revision ID:

Item Name: Tow Ring

Stop



Start Date: 11/24/2010 Start Qty: 10.00



Cust Item ID:

Required Date: 11/30/2010 Req'd Qty: 10.00



Customer:

Reference:

Approvals:

Process Plan: *M*Date: *10-11-24*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr |
|----------|--------------|
| D3407 | Rev E |

100



Large Fab

Large Fab

Memo

Large Fab

Weld D3407-3/-5 using welding rod TIG174 as per Dwg D3407 & QSI
004 A/R TIG174 ROD Batch: *M101972*

110



QC9- Inspect visual per QSI004- Fusion Welds

QC

Quality Control

Memo

120



QC5- Inspect part completeness to step on W/O

QC

Quality Control

Memo

0.00
0.00*Sulak 11/19**PL 11-01-19 X10**NBE 11-01-19 10 f**X10*

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|----------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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NOTE: Date & initial all entries

Work Order ID 64071

Page 2

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Item Name: Tow Ring

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Start Date: 11/24/2010 Start Qty: 10.00



Cust Item ID:

Required Date: 11/30/2010 Req'd Qty: 10.00



Customer:

Reference:

Approvals:

Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center ID

130



Powdercoat

Powder Coating

Operation
Description

White Gloss(Ref.4.3.5.1) per QSI005 4.3-Alum

M11595L.

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140



QC

Quality Control

QC3- Inspect Part Finish

0.00

10 6/11/2010

Memo

0.00

150



Packaging

Packaging

Identify as per dwg & Stock Location: 461

0.00

Memo

0.00

11/24/10 10

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Work Order ID 64071

Page 3

Wednesday, November 24, 2010 8:34:16 AM

Item ID: D3407-043

Accept



Setup Start



Revision ID:

Item Name: Tow Ring

Stop



Start Date: 11/24/2010 Start Qty: 10.00



Cust Item ID:

Required Date: 11/30/2010 Req'd Qty: 10.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____

Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____

SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center ID

160



QC

Quality Control

Operation
Description

QC21- Final Inspection - Work Order Release

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

11/01/20 JJ

MF

11-01-24

Memo

0.00

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 160 | QC21- Final Inspection - Work Order Release | 0.00 | | | | | | | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

Wednesday, November 24, 2010 8:34:20 AM

Page 1

Work Order ID: 64071



Parent Item: D3407-043



Parent Item Name: Tow Ring

Start Date: 11/24/2010

Required Date: 11/30/2010

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A□05.10.14□New issue□KJ/EC

IPP Rev:B 08-09-09 revE as per dwg DD verified by:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D3407-3 | | Manufactured | No | | | 100 | Each | 22.0000 | 1 | 10 | | Cpl 11-01-19 | |

Stem

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| WA | 22 | |
| 53733 | 22 | |

D3407-5

Ring

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| WA | 22 | |
| 53733 | 22 | |

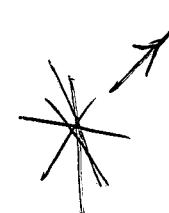
(10)

10
Cpl 11-01-19

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| WA | 13 | |
| 62641 | 13 | |

364453 → (6)

(2)



| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| WA | 13 | |
| 62641 | 13 | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

8

7

6

5

4

3

2

1

| QTY -041 | QTY -043 | QTY -045 | PART NUMBER | DESCRIPTION |
|-------------|-------------|-------------|-------------|-------------|
| X | | | D3407-041 | TOW RING |
| | X | | D3407-043 | TOW RING |
| | | X | D3407-045 | TOW RING |
| 1 | | | D3407-1 | STEM |
| 1 | | | D3407-3 | STEM |
| 1 | 1 | 1 | D3407-5 | RING |
| | | 1 | D3407-7 | STEM |

SHOP COPY

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ENGINEERING

UNCONTROLLED COPY

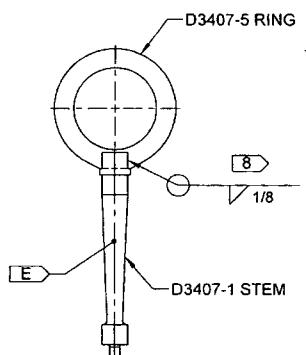
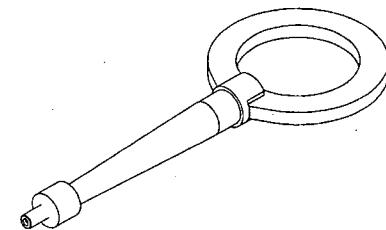
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WITHOUT NOTICE

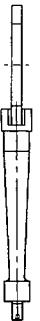
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NO. 44071

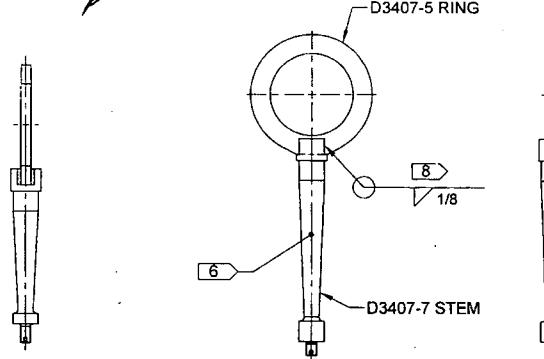
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D3407-041 TOW RING



D3407-043 TOW RING



D3407-045 TOW RING

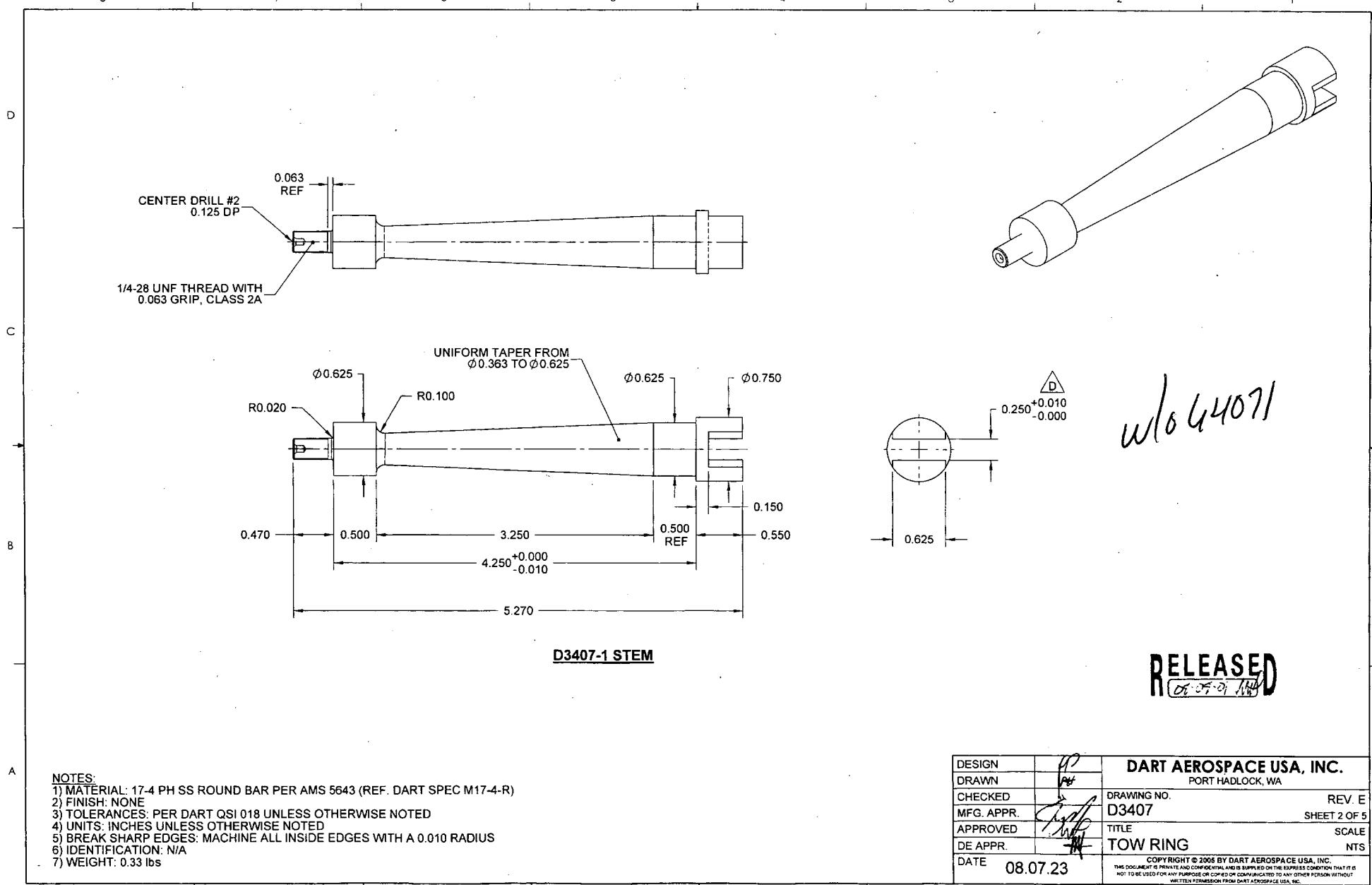
RELEASED
OF C8-51/VB

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER **E**
- 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs
- 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING

| | | | |
|------------|---|---|--------------|
| E | ADD D3407-045 (ZN B2-1, DB-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY | PH | 08.07.23 |
| D | D3407-1/3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/3 (ZN B6-4); REASON: PRODUCTION FACILITY | PH | 08.04.07 |
| C | -1/3 LONGER FOR FIT W/WASHER | CP | 05.09.09 |
| B | UPDATE DIAMETER, THREAD CLASS ADDED | CP | 05.06.17 |
| A | NEW ISSUE | CP | 05.03.16 |
| REV. | DESCRIPTION | BY | DATE |
| DESIGN | <i>99</i> | DART AEROSPACE USA, INC. | |
| DRAWN | <i>PD</i> | PORT HADLOCK, WA | |
| CHECKED | | DRAWING NO. | REV. E |
| MFG. APPR. | | D3407 | SHEET 1 OF 5 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | TOW RING | NTS |
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8 7 6 5 4 3 2 1



A

NOTES:
 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
 2) FINISH: NONE
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
 6) IDENTIFICATION: N/A
 7) WEIGHT: 0.33 lbs

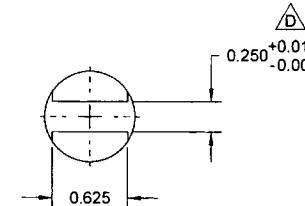
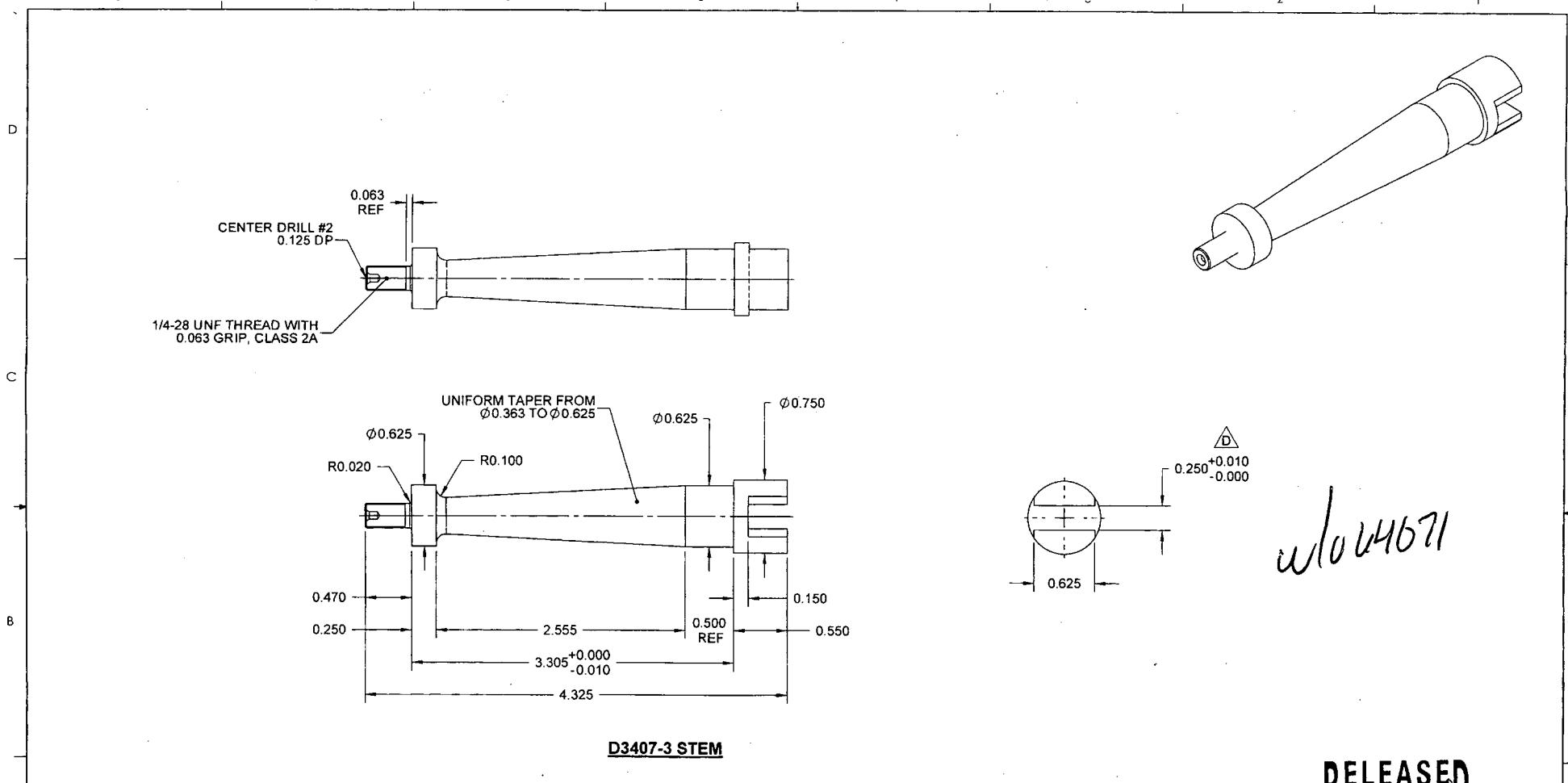
8 7 6 5 4 3 2 1

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| DESIGN | 92 | DART AEROSPACE USA, INC. |
| DRAWN | AS | PORT HADLOCK, WA |
| CHECKED | ✓ | DRAWING NO. |
| MFG. APPR. | ✓ | REV. E |
| APPROVED | ✓ | D3407 |
| DE APPR. | ✓ | SHEET 2 OF 5 |
| DATE | 08.07.23 | TITLE TOW RING |
| | | NTS |

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A

8 7 6 5 4 3 2 1



NOTES:

- 1) MATERIAL: 17-4 PH SS ROUND BAR PER AMS 5643 (REF. DART SPEC M17-4-R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: MACHINE ALL INSIDE EDGES WITH A 0.010 RADIUS
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.27 lbs

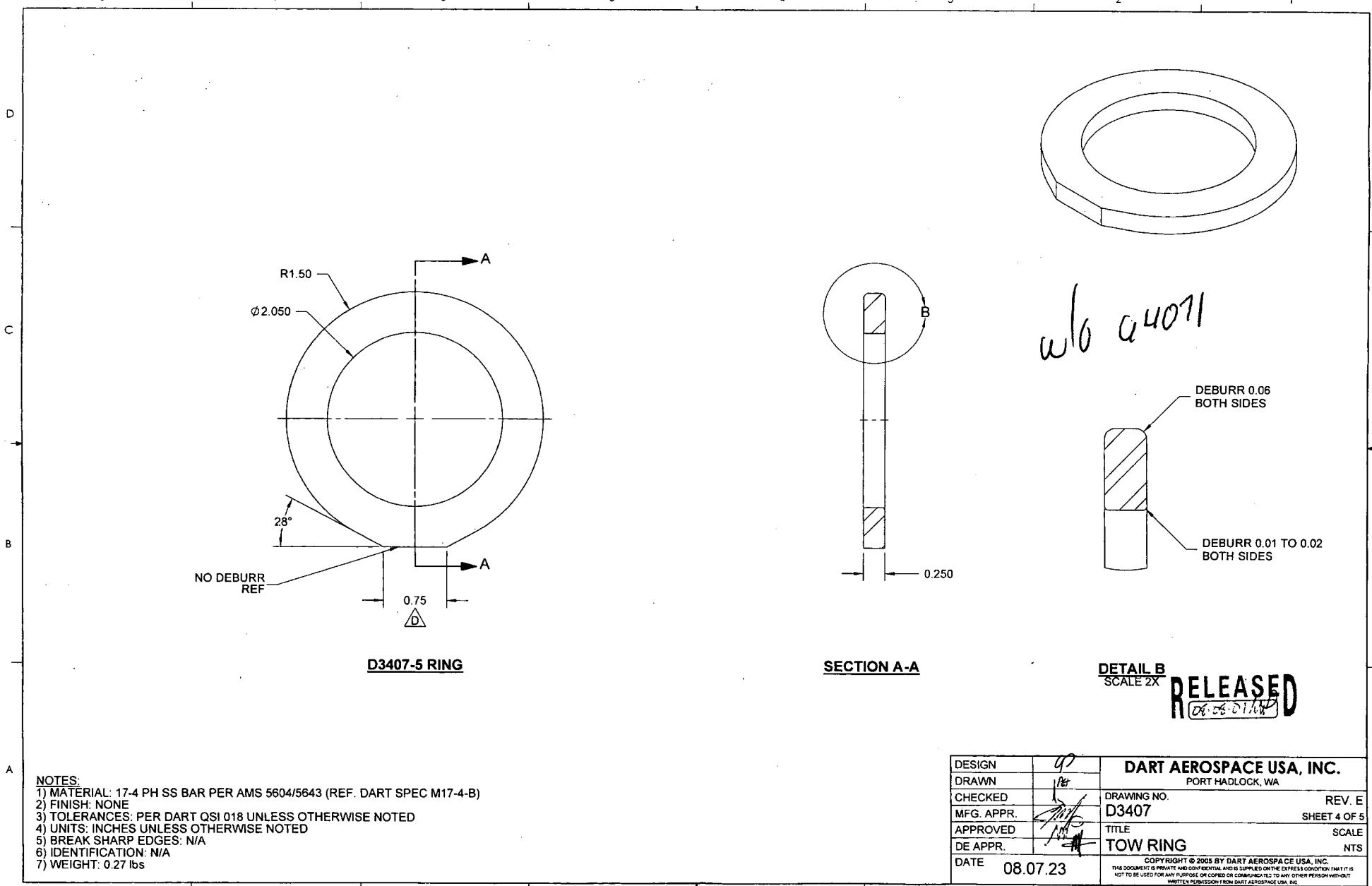
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| DESIGN | <i>[Signature]</i> | DART AEROSPACE USA, INC. |
| DRAWN | <i>[Signature]</i> | PORT HADLOCK, WA |
| CHECKED | <i>[Signature]</i> | REV. E |
| MFG. APPR. | <i>[Signature]</i> | SHEET 3 OF 5 |
| APPROVED | <i>[Signature]</i> | TITLE |
| DE APPR. | <i>[Signature]</i> | SCALE |
| DATE | 08.07.23 | NTS |

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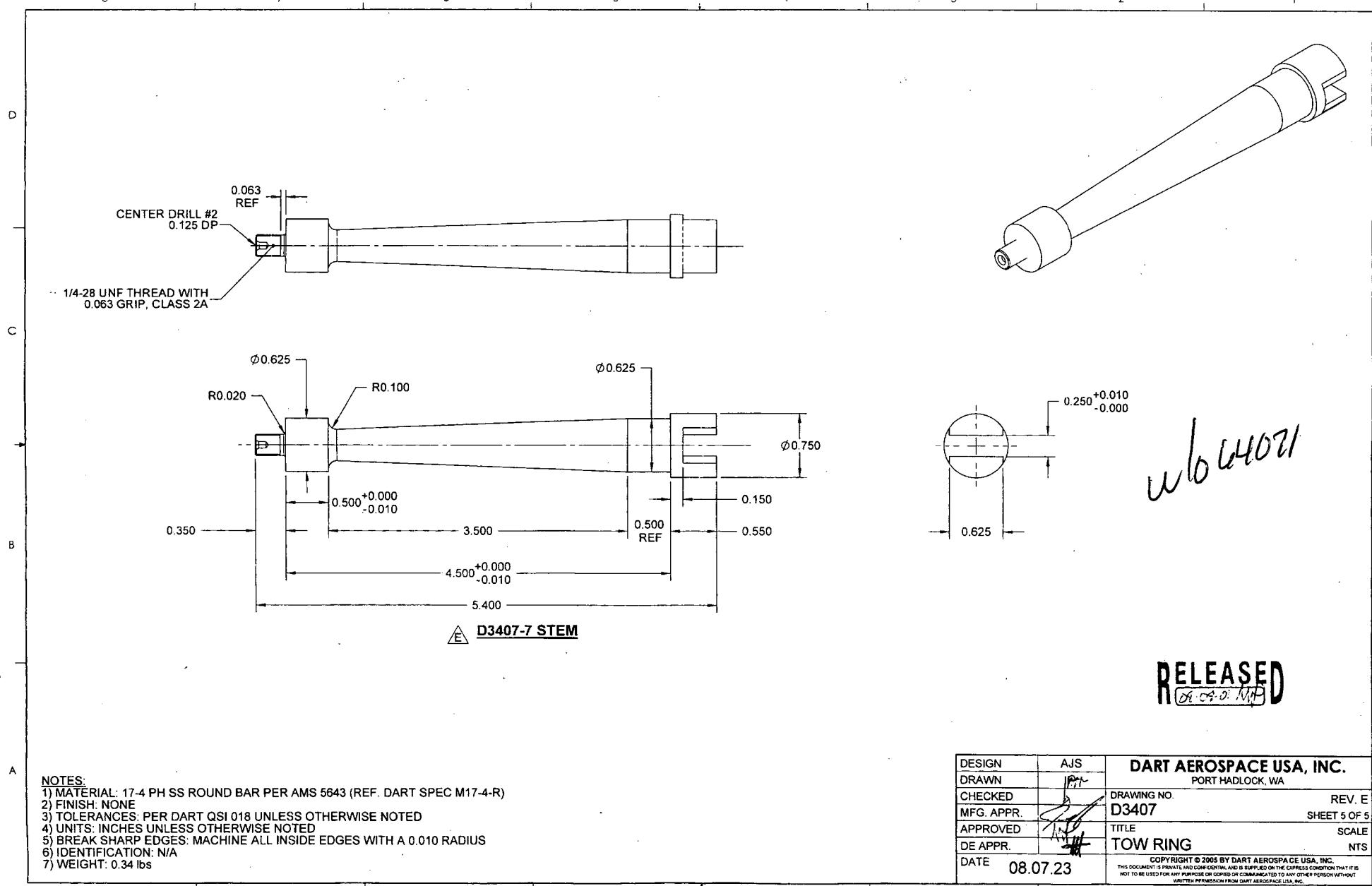
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| DRAWN | <i>[Signature]</i> | PORT HADLOCK, WA |
| CHECKED | | REV. E |
| MFG. APPR. | <i>[Signature]</i> | D3407 |
| APPROVED | <i>[Signature]</i> | SHEET 5 OF 5 |
| DE APPR. | <i>[Signature]</i> | TITLE TOW RING |
| DATE | 08.07.23 | SCALE NTS |

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